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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,212	07/10/2003	Yuzuru Suzuki	MIN-1	4217

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EXAMINER	
NGUYEN, HANH N	

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/618,212	SUZUKI ET AL.	
	Examiner	Art Unit	
	Nguyen N. Hanh	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,10 and 11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,10 and 11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1, 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. in view of Noll et al. (DE19538547), Doi et al. and further in view of Hildebrandt

Regarding claim 1, Sato et al. disclose a motor (2 in Fig. 1) for a meter comprising: a stator (A and B in Fig. 3) including a plurality of stator yokes (23 and 26), coils obtained by a winding of a magnet wire arranged on the stator yokes, and pole teeth arranged on an inner periphery of the stator yokes (Figs. 3 and 9); and a rotor assembly disposed in a central portion of the stator with a gap opposing the pole teeth. Sato et al. fail to show the rotor assembly includes a magnet arranged on an outer periphery of a sleeve made of a resin and a rotary shaft made of metal, the rotary shaft is hollow-cylindrical with open ends, an inner wall of the rotary shaft is coated with a light-reflecting layer.

However, Noll et al. disclose an indicator drive system wherein the rotary shaft is hollow-cylindrical with open ends, an inner wall of the rotary shaft is coated with a light-reflecting layer (abstract and Fig. 1) for the purpose of assuring sufficient lamination of the indicating needle.

Moreover, Doi et al. disclose a structure for a stepping motor wherein the rotor assembly includes a magnet arranged on an outer periphery of a sleeve made of a resin Col. 5, lines 20-25 and Col. Col. 9, lines 45-48) for the purpose of simplifying the structure of the motor (Col. 1, lines 5-10).

Morevover, Hildebrandt discloses a motor structure wherein the shaft is made of metal for the purpose of reducing cost.

Since Sato et al., Noll et al., Doi et al. and Hildebrand are in the same field of endeavor, the purpose disclosed by Noll et al., Doi et al. and Hildebrandt would have been recognized in the pertinent art of Sato et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Sato et al. by making a rotor having a magnet arranged on an outer periphery of a sleeve made of a resin and a rotary shaft made of metal, the rotary shaft is hollow-cylindrical with open ends, an inner wall of the rotary shaft is coated with a light-reflecting layer as taught by Noll et al., Doi et al. and Hildebrandt for the purposes discussed above.

Regarding claim 2, Doi et al. also show a motor structure further comprising a front plate arranged as a first bearing for supporting the rotary shaft and an end plate arranged as a second bearing for supporting the rotary shaft (Fig. 1A).

Regarding claim 11, Sato et al. disclose a motor (2 in Fig. 1) for a meter comprising: a stator (A and B in Fig. 3) including a plurality of stator yokes (23 and 26), coils obtained by a winding of a magnet wire arranged on the stator yokes, and pole teeth arranged on an inner periphery of the stator yokes (Figs. 3 and 9); a rotor rotatably

disposed in a central portion of the stator with a gap opposing the pole teeth. Sato et al. fail to show the rotor includes a magnet arranged on an outer periphery of a sleeve made of a resin and a rotary shaft made of a metal, the rotary shaft is hollow-cylindrical with both ends open, an inner wall of the rotary shaft directs a light emitted from a light source disposed at the one end of the rotary shaft to an indicating needle attached to the other end of the rotary shaft.

However, Noll et al. disclose an indicator drive system wherein the rotary shaft is hollow-cylindrical with open ends, an inner wall of the rotary shaft directs a light emitted from a light source (10) disposed at the one end of the rotary shaft to an indicating needle attached to the other end of the rotary shaft for the purpose of assuring sufficient lamination of the indicating needle.

Moreover, Doi et al. disclose a structure for a stepping motor wherein the rotor includes a magnet arranged on an outer periphery of a sleeve made of a resin Col. 5, lines 20-25 and Col. Col. 9, lines 45-48) for the purpose of simplifying the structure of the motor (Col. 1, lines 5-10).

Morevover, Hildebrandt discloses a motor structure wherein the shaft is made of metal for the purpose of reducing cost.

Since Sato et al., Noll et al., Doi et al. and Hildebrand are in the same field of endeavor, the purpose disclosed by Noll et al., Doi et al. and Hildebrandt would have been recognized in the pertinent art of Sato et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Sato et al. by making a rotor having a

magnet arranged on an outer periphery of a sleeve made of a resin and a rotary shaft made of metal, the rotary shaft is hollow-cylindrical with open ends, an inner wall of the rotary shaft directs a light emitted from a light source disposed at the one end of the rotary shaft to an indicating needle attached to the other end of the rotary shaft as taught by Noll et al., Doi et al. and Hildebrandt for the purposes discussed above.

2. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noll et al. in view of Sato et al.

Regarding claim 10, Noll et al. disclose a panel meter comprising: a display board (3 in Fig. 1) which has a scale and an opening formed therein; a motor (for indicator drive system 1) which is arranged at one side surface of the display board, and a rotary shaft (5) having a first end passing through the opening of the display board so as to protrude from the other side surface of the display board, the rotary shaft is hollow-cylindrical with open ends, an inner wall of the rotary shaft is coated with a light-reflecting layer (8), the rotary shaft allowing light to pass therethrough in an axial direction; a light source (10) which supplies light to a second end of the rotary shaft: and an indicating needle which is made of a light-transmissible material, and attached to the first end of said the rotary shaft so as to receive the light having passed through said the rotary shaft. Noll et al. fail to show the motor includes the rotary shaft.

However, Sato et al. disclose a motor (2 in Fig. 1) for a meter includes the rotary shaft for the purpose of suppressing undesirable movements of a pointer.

Since Sato et al. and Noll et al. are in the same field of endeavor, the purpose disclosed by Sato et al. would have been recognized in the pertinent art of Noll et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Noll et al. by using the motor includes the rotary shaft in the indicator drive system as taught by Sato et al. for the purpose of suppressing undesirable movements of a pointer.

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information on How to Contact USPTO

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is (571) 272-2031. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner 's supervisor, Darren Schuberg, can be reached on (571) 272-2044. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

HNN

May 12 , 2005

DARREN SCHUBERG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800